Listing of Claims:

1.   (currently amended)   In a decoder having one or more branch metric units for calculating branch metric values, a method for performing normalization comprising:

if a specified normalization condition is met, subtracting a normalization amount from a branch metric value at each of said branch metric units to produce a normalized branch metric value; and

if a second specified normalization condition is met, subtracting a second normalization amount from branch metric calculations performed by each of said one or more branch metric units to produced a second normalized branch metric value.

2.   (original)   The method as in claim 1 wherein said specified normalization condition is that a plurality of state metrics are above a threshold value.

3.   (original)   The method as in claim 1 further comprising adding said normalized branch metric value to a plurality of stored state metric values.

4.   (original)   The method as in claim 3 wherein said state metric values are stored in a plurality of accumulators.

5.   (original)   The method as in claim 1 wherein said branch metric calculations are Viterbi branch metric calculations.

2

6.   (canceled).

7.   (currently amended)   The method as in claim 1[[6]] wherein said second specified normalization condition is that a plurality of state metrics are above a second threshold value.

8-12.   (canceled).

13.   (currently amended) An apparatus comprising:

normalization logic to generate a normalization signal responsive to a specified normalization condition; and

a branch metric unit to subtract a normalization amount from a branch metric value responsive to said normalization signal, wherein said normalization logic generates a second normalization signal responsive to a second specified normalization condition, and wherein said branch metric unit subtracts a second normalization amount from said branch metric value responsive to said second normalization signal.

14.   (original)   The apparatus as in claim 13 wherein said specified normalization condition is that a plurality of state metric values are above a threshold value.

3

15.   (original)   The apparatus as in claim 13 further comprising:

an adder to add said normalized branch metric value to a plurality of stored state metric values.

16.   (original)   The apparatus as in claim 15 further comprising:

a plurality of accumulators for storing said state metric values.

17.   (original)   The apparatus as in claim 13 wherein said branch metric value is a Viterbi branch metric value.

18.   (canceled).

19.   (currently amended) The apparatus as in claim 13[[18]] wherein said second specified normalization condition is that a plurality of state metric values are above a second threshold value.

20.   (currently amended)   A machine-readable medium having code stored thereon which defines an integrated circuit (IC), said IC comprising:

normalization logic to generate a normalization signal responsive to a specified normalization condition; and

a branch metric unit to subtract a normalization amount from a branch metric value responsive to said normalization signal, wherein said normalization logic generates a second normalization signal responsive to a second specified

4

normalization condition, and wherein said branch metric unit subtracts a second
normalization amount from said branch metric value responsive to said second
normalization signal.

21.   (original)   The machine-readable medium as in claim 20 wherein
said specified normalization condition is that a plurality of state metric values are
above a threshold value.

22.   (original)   The machine-readable medium as in claim 20 wherein
said IC further comprises:

an adder to add said normalized branch metric value to a plurality of stored
state metric values.

23.   (original)   The machine-readable medium as in claim 22 wherein
said IC further comprises:

a plurality of accumulators for storing said state metric values.

24.   (original)   The machine-readable medium as in claim 20 wherein
said branch metric value is a Viterbi branch metric value.

25.   (canceled).

5

26.   (currently amended)   The machine-readable medium as in claim
20[[25]] wherein said second specified normalization condition is that a plurality of
state metric values are above a second threshold value.

6